

Patent Abstracts of Japan

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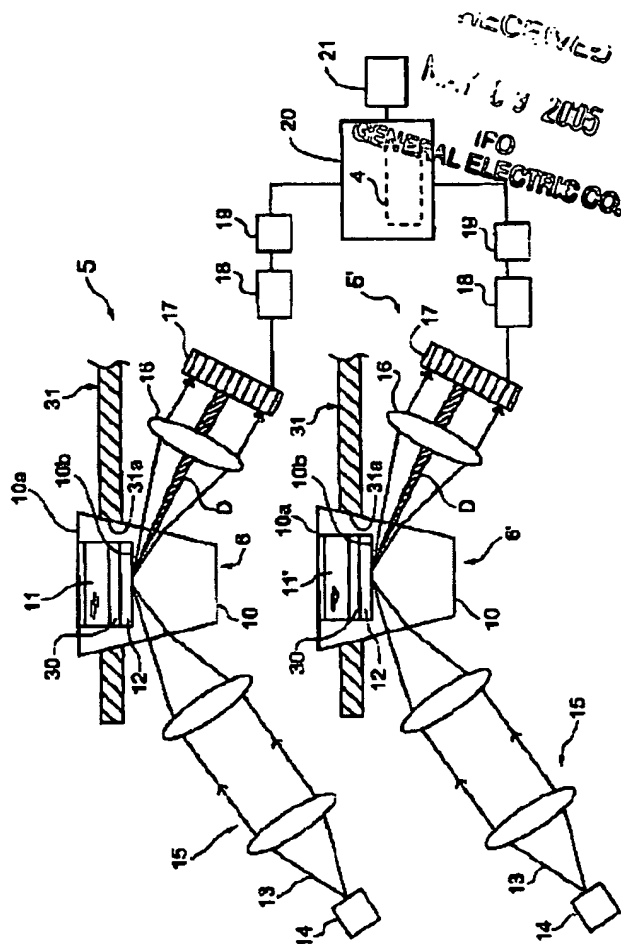
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TITLE : MEASURING METHOD AND APPARATUS UTILIZING TOTAL REFLECTION ATTENUATION



ABSTRACT : PROBLEM TO BE SOLVED: To improve accuracy in measuring changes in the state of attenuated total reflection by reducing the effects of the sensitivity difference between a reference unit and a measuring unit, when correcting the result of measurement in the measuring unit through the use of the result of measurement in the reference unit.

SOLUTION: Only a solvent is first supplied to a measuring chip 6 and a reference chip 6' to which a sensing substance 30 is distributed. A light beam 13 is made incident at various angles so as to obtain a total reflection condition at an interface between a metal film 12 formed in the inner bottom surface of each chip and a dielectric block 10 below. The light beam 13 totally reflected at the interface is detected by a photodiode array 17. The sensitivity difference between a measuring unit 5 and a reference unit 5' is computed based on the result of the detection. Then, a specimen is added only to the measuring chip 6 to perform similar measurement. The measurement result of the reference unit 5' are calibrated through the use of the sensitivity difference, and the measurement result of the measuring unit 5 are corrected by the calibrated measurement result.

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